GAMBURG, B.M., inzhener.

Steel tubing for installation work. Prom.energ. 10 no.5:27-28 My '53.
(MLRA 6:5)

1. Proyektnaya kontora tresta "Elektromontazh-53". (Electric conduits)

GAMBURG, B.M., inzhener.

[redacted]

Shortcomings in the training of electrical engineers. Elektrichestvo no.1:82 Ja '54. (MLRA 7:2)

1. Novosibirskaya otdeleniye GPI Tyazhpromelektroproyekt.
(Electric engineers)

GAMBURG, B.M., inzh.

An efficient electric power distribution network for agricultural regions. Energetik 10 no.12:6-8 D '62. (MIRA 16:1)
(Electric power distribution) (Rural electrification)

L 57130-65

ACCESSION NR: AP5018708 UR/0104/64/000/012/0078/0080

6
B

AUTHOR: Gamburg, B. M. (Engineer)

TITLE: Scientific-Technical Conference on Generalizing the Experience in the Design and Construction of Electric Transmission Lines and Substations

35

SOURCE: Elektricheskiye stantsii, no. 12, 1964, 78-80

TOPIC TAGS: electric engineering conference, electric power engineering, transmission line, electric substation equipment

ABSTRACT: This conference, held in Novosibirsk in the summer of 1964, was attended by 216 delegates and involved the presentation of 48 papers and 18 general communications. It was concerned with a number of urgent problems of accelerating the technical progress in power system construction, particularly under the conditions of Siberia and the Far East. Among others, A. N. Zeyliger and I. I. Batyuk described the prospects for the development of the Integrated Central Siberian Power Grid and the formation and development of the Trans-Baykal and Far Eastern inte-

Card 1/2

L 57130-65
ACCESSION NR: AP5018708

grated power grids, and the ensuing needs for power system construction during 1966-1970. The overall length of electric transmission lines with voltage of from 35 to 500 kv to be built in Siberia and the Far East is about 20,000 km, and the total installed capacity of the newly built substations reaches 20 Gva.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE

NR REF SOV: 000 OTHER: 000 JPRS

10

Card 2/2

GAMBURG, B. Z.; MOROZOVA, A. S.; STUDENETSKAYA, Ye. N.

"Problemy sootnosheniya traditsionnoy kul'tury i sovremennosti v eks-pozitsii Gosudarstvennogo muzeya etnografii narodov SSSR."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

GAMBURG, D.M.

Increase quality in the production of relays. Avtom., telem. i sviaz' 4 no. 12:38 D '60. (MIRA 14:1)

1. Nachal'nik otdela signalizatsii, tsentralizatsii i blokirovki sluzhby signalizatsii i svyazi Severnoy dorogi.
(Railroads--Signaling)
(Electric relays)

GAMBURG, D.M.

GAMBURG, D.M.; GRIGOR'YEV, Yu.V.

Brigades of construction and installation workers should be organized in railroad districts. Avtom., telem. i sviaz' 5 no.3:35-36 Mr '61. (MIRA 14:9)

1. Nachal'nik otdela signalizatsii, tsentralizatsii i blokirovki sluzhby signalizatsii i svyazi Severnoy dorogi (for Gamburg).
2. Nachal'nik dorozhnoy laboratorii Severnoy dorogi (for Grigor'yev).

(Railroads--Signaling--Block system)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

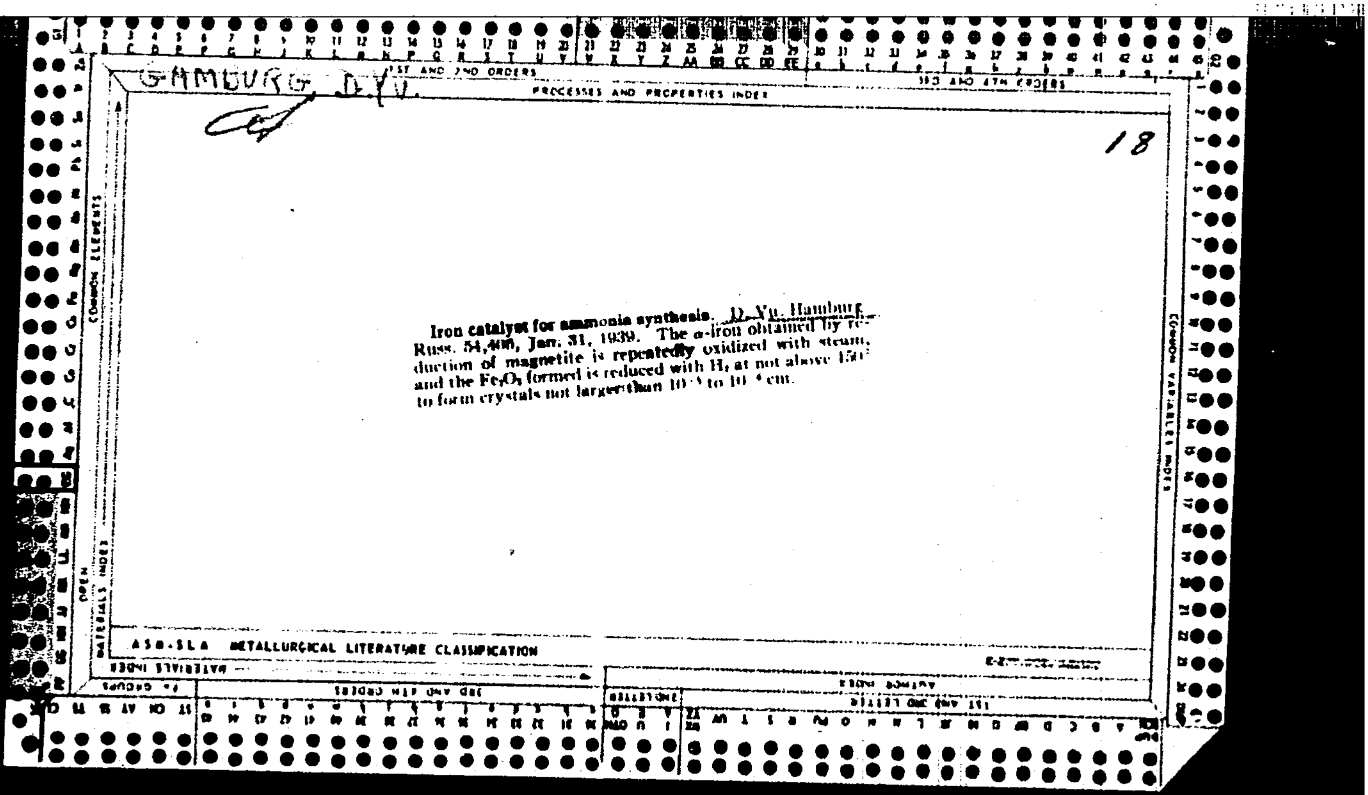
3RD AND 4TH ORDERS

CA GAMBURG, D.YU.

27

Preparation of castor oil. D. Yu. Gamburg. *Byull. Lako-Krasochnoi Prom.* **1938**, No. 6, 32-3; *Khim. Referat. Zhur.* **2**, No. 2, 121 (1939).—Heating castor oil without blowing for 24 hrs. had almost no effect. Heating the oil for 16-20 hrs. at 250° in a current of air at a velocity of 8 l./min. caused the oil to darken. The oil becomes sticky and dissolves in basic solns. with difficulty. Heating in the presence of such catalysts as rosin, captax, flowers of S and $AlCl_3$ as well as *in vacuo* caused little change in the qualities of castor oil. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



GAMBURG, D.YU.

18

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

COMMON ELEMENTS

Iron catalyst for ammonia synthesis. D. Yu. Hamburg. Russ. 54,406, Jan. 31, 1939. The α-iron obtained by reduction of magnetite is repeatedly oxidized with steam, and the Fe_3O_4 formed is reduced with H_2 at not above 150° to form crystals not larger than 10^{-3} to 10^{-4} cm.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

GAMBURG, D. YU.

Solubility of liquids in compressed gases. Solubility of benzene in compressed nitrogen. I. Kritschevski and D. Gamburg (*Acta Physicochim. U.R.S.S.*, 1942, **16**, 362—375).—The solubility of C_6H_6 in compressed N_2 has been studied at temp. from 35° to 100°, and pressures up to 1100 kg per sq cm. The solubility curve shows a min. and a point of inflexion. With increase of pressure the solution acquires a structure. A. I. M.

KRICHEVSKIY, I. R.; GAMBURG, D. Yu.

Moscow State Nitrogen Institute (-1941-)

"Solubility of Liquids in Condensed Gases." Zhur. Fiz. Khim., Vol. 17, No. 4, 1943

[redacted]-52059019

GAMBURG, D. YU.

PA 30T3

USSR/Chemistry - Vinegar
Food

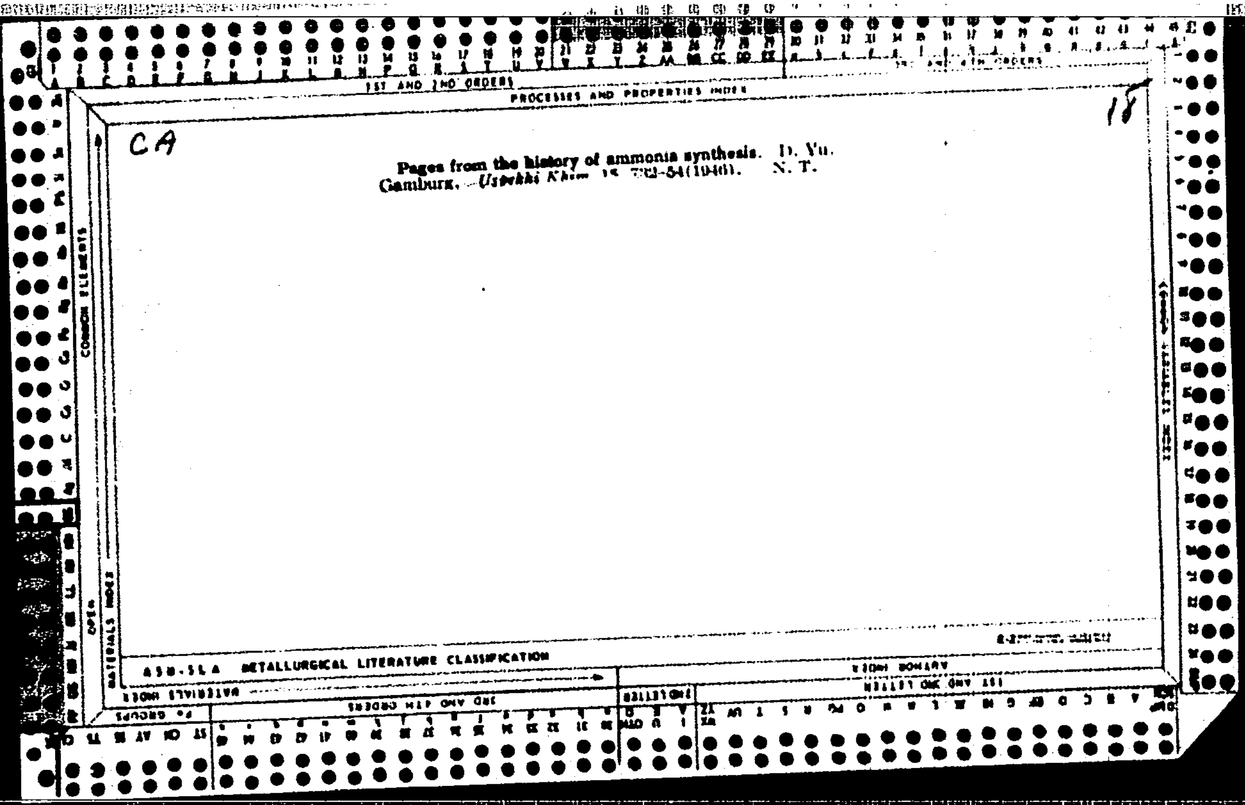
Dec 1946

"The Past and Present of One Chemical Problem," D. Yu. Gamburg, Candidate in Chemical Sciences, 3 pp

"Nauka i Zhizn'" No 11/12

Historical survey of the development of methods for producing vinegar.

30T3



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

18

Pages from the history of ammonia synthesis. D. Yu. Gamburg. *Uspekhi Khim.* 15, 752-54(1946). N. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GAMBURG, D.; TSIKLIS, D. [translator]; BRIDGMAN, P.V. [author].

Most recent works in the field of high pressure (From: Rev. of Modern Physics, 18, no.1, 1, 1946: translated by D.Gamburg, D.Tsiklis). P.V.Bridgman. Usp. fiz. nauk 31 no.1:53-95 '47.
(MLRA 6:12)
(Pressure (Physics))

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

C 4

13

Iron catalyst. D. Yu. Gamburg. U.S.S.R. 68,429, May 31, 1947. Molten magnetite together with activating addns. is cast into sheets. The latter are oxidized with steam and then reduced at a temp. not above 450° by the method described in U.S.S.R. 54,408 (*C.A.*, 35, 3040^9).
M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PA 30T2

GAMBURG, D. YU.

USSR/Chemistry - Calcium Carbonate Jul 1947
Calcium Carbonate

"New Method of Obtaining Calcium Carbide," D. Yu. Gamburg, Candidate in Chemical Sciences, 3 pp

"Nauka i Zhizn'" No 7

There are two main problems connected with the production of calcium carbide. One is the need for greater production of calcium carbide and the other is the contribution of the USSR to general international scientific knowledge and the adoption by other countries of Russian industrial production methods. For this reason the author briefly describes the advantages of the new system of production in which coal is burned.

30T2

LC

CA

Solubility of lubricating oils in compressed gases. D. Yu. Gamburg. *Neftyanoe Khoz.* 25, No. 9, 46-9 (1947).—The soly. of compressor oil M and that of a bright stock in compressed N were experimentally detd. at temps. of 50, 100, and 150° under 100, 300, 600, and 900 atm. pressure. The results along with a few data on the soly. of bright stock in a 1:3 mixt. of N and H_2 at 100° are tabulated and graphed. Contrary to the opinion that oil is suspended in the form of spray or fog, it is shown to be dissolved in the gas in amts. up to 840 g./cu.m. of compressed gas or 1.8 g./cu.m. of the gas reduced to normal temp. and pressure. There is some fractionation effect, e.g. a condensate recovered by freezing out the compressor oil from the gas has a mol. wt. of 300, compared to 343 of the original oil. This effect might be utilized to recover an oil fraction of low soly. for use in compressors. Bruno C. Metzner

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GAMBURG, D. YU.

PA 167T103

USSR/Physics - Solutions **Mar 50**
Gas-Liquid Phase

"Phase and Volumetric Relationships in Gas-Liquid Systems at High Pressures," D. Yu. Gamburg, Inst of Nitrogen Ind, Moscow

"Zhur Fiz Khim" Vol XXIV, No 3, pp 272-278

Describes apparatus for measuring partial molar volumes of liquids dissolved in gases under pressure of 1 to 5,000 atm. Apparatus is applicable to heterogeneous and homogeneous systems, and can be used to obtain data on phase equilibria. Submitted 4 Apr 49.

[redacted] **167T103**

CA

2

Volume behavior of dilute gas solutions in the vicinity of the critical point of the pure solvent. D. Yu. Gamburg (Gosudarst. Nauch.-Issledovatel. i Proektnyi Inst. Azotnoi Prom.). *Doklady Akad. Nauk S.S.S.R.* **79**, 459-60 (1951).—By the method based on the principle of the differential volumeter (*C.A.* **44**, 7134*d*), the partial molal vols. $\bar{V}_2$ of C_6H_6 dissolved in compressed CO_2 at 31.1°; under p = 5.84, 15.50, 30.00, 49.10 atm., $\bar{V}_2$ = 1580, 515, 190, −192 cc. The neg. value of $\bar{V}_2$, possible because the solvent (CO_2) has a lower crit. temp. (31.04°) than the solute C_6H_6 (288.5°), is in accord with the classic theory of the crit. state.

N. Thon

Gamburg, D.Yu.

5

2404. ENTROPY-TEMPERATURE DIAGRAMS FOR HYDROGEN, NITROGEN, CARBON MONOXIDE, ETHANE, AND ETHYLENE. Bol'shakov, P.E., Gamburg, D.Yu., [illegible], G.J., Khazanova, N.E. and Tsiklis, D.S. (Trudy Gos. Nauch.-Issled. i proekt. Inst. Azot. Prom. (Proc. Inst. Nitrogen Ind., U.S.S.R.), 1952, (1), 57-71; abstr. in Chem. Abstr., 1956, vol. 50, 14295). Temperature-entropy diagrams constructed for the following temperature ranges and pressures are set forth: hydrogen from -250 to +500° and from 0.2 to 1200 atm; nitrogen from -190 to +600° and from 1 to 6000 atm; carbon monoxide from -110 to +400° and from 1 to 1200 atm; ethane from -100 to +260° and from 0.75 to 100 atm; ethylene from -110 to +200° and from 1 to 3000 atm. The entropy and heat content of 1 kg gas at 0° and 1 atm pressure are taken as the zero reading for entropy and heat content.

C.

GAMBURG, D. YU. Aug 52

USSR/Chemistry - Nitrogen

"Volumetric Behavior of Dilute Gas Solutions in Relation to Pressure," D. Yu. Gamburg

Zhur Fiz Khim, Vol 26, No. 8, pp 1122-1124

Measured the fractional molar contents of benzene and methanol dissolved in compressed N at temps of 30°, 50°, and 75° #C, and at pressures of 50-1500 atm. By establishing the end of the single-phase equil during the detn of partial molar volumes, the soly of benzene in N was detd. The resulting data were compared with the soly of benzene detd by a dynamic method. The discrepancy bet values obtained by the two methods did not exceed 5%.

(CA 47 no.13: 6204 '53)

263 T 9

F

2

Volume behavior of dilute gaseous solutions depending on the chemical nature of the solvent gas. D. Yu. Gamburg. *Doklady Akad. Nauk S.S.S.R.* **82**, 877(1952).—Partial molal vols. $\bar{v}$ of C_2H_4 in different compressed gases were detd. at 25 and 50° between 50 and 500 atm. Values of $\bar{v}$ at infinite diln., in cc./mole, under 49.4, 97.8, 195, 291, 485 atm., are: in H_2, at 25°, 405, 168, 90, 85, 90; at 50°, 480, 295, 110, 97, —; in N_2, at 25°, 220, 83, 43, 50; at 50°, 290, 105, —, 55, 70; in CH_4, at 25°, 160, −82, −70, 1, 43; at 50°, 145, −30, −40, 11, —. In terms of the pressure, $\bar{v}$ passes through a min., as on curves of soly. of a liquid in a compressed gas. The neg. values of $\bar{v}$ in CH_4 indicate strong interaction between the solvent and the solute. N. Thon

GAMBURG, D. Yu.

①

✓ 4331. GAS PRODUCER CUM BLAST FURNACE. ✓Gamburg, D.Yu. (Nauka i Zhizn (Sci. & Life, Moscow) Aug. 1953, vol. 20; 25, 24). Producer gas is produced efficiently at high temperatures by use of oxygen; ores may be reduced as a by-product.

GAMBURG, D.Yu., kandidat khimicheskikh nauk.

Salt of fertility. Nauka i zhizn' 20 no.12:11-14 D '53.
(MLRA 6:12)
(Nitrates)

GAMBURG, D.Yu., kandidat khimicheskikh nauk.

Gasification in a "boiling" layer. Nauka i zhizn' 22 no.2:14-16 F '55. (MIRA 8:3)

(Coal gasification)

GAMBURG, D. Yu., kandidat khimicheskikh nauk.

Liquid fertilizers. Nauka i zhizn' 23 no.8:10-11 Ag '56. (MIRA 9:9)
(Fertilizers)

Ganburg, D. Yu.

2752. GASIFICATION OF ANTHRACITE IN WATER GAS GENERATORS.
Ryabtsev, I.I., Vainshtein, V.B. and Ganburg, D.Yu. (Trud. Nauch.-Issled. Proekt Inst. Azot. Prom. (Proc. Sci. Res. Plan. Inst. Nitrog. Ind. U.S.S.R.), 1954, (4), 82-116; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1956, (6), 16984). Experimental data are given on the production of clean synthesis gas from anthracite. Properties of anthracites and the properties required for gasification are discussed and a comparison is made between Donbass anthracite and Gubakha coke. The anthracite is a fuel on which generators will operate steadily on the water gas process, and the gas produced has much the same content of $CO+H_2$, CO_2 and CH_4 as that from the coke. The disadvantages of anthracite were low ash fusion temperature, insufficient mechanical strength and reduced heat resistance. The best fuel was class AK anthracite from the Nesvetai preparation plant. Material and heat balances are given including a sulphur balance for the gasification of anthracite and coke.

SUBJECT: USSR/Development of Chemistry in the USSR 25-6-4/46

AUTHOR: Gamburg, D.Yu., Candidate of Chemical Sciences

TITLE: Chemistry and Technical Progress (Khimiya i tekhnicheskiy progress)

PERIODICAL: Nauka i Zhizn' - June 1957, # 6, pp 9-12 (USSR)

ABSTRACT: The article deals with the development of the chemical industry in the USSR during the Communist regime. Present Soviet research institutes and laboratories specializing in chemistry are well furnished with excellent equipment. Universities and technical schools train masses of chemists every year. Technical literature and periodicals on chemistry keep scientists and students up to date.

The most striking achievements made by Soviet chemical technology are in the field of synthetic rubber, synthetic fibre and plastics. Many of the rubber products show entirely new physical and physico-chemical properties and have replaced natural rubber in various branches of industry. Synthetic fibres have proved to be superior to most natural ones. Plastics are produced that answer exactly the purpose

Card 1/2

25-6-4/46

TITLE: Chemistry and Technical Progress (Khimiya i tekhnicheskiy progress)

they are needed for.

Economical and efficient utilization of raw materials are the characteristic features of the Soviet chemical industry.

The article contains 6 diagrams and 2 pictures.

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 2/2

ГАМБУРГ, Д.Ю.

KIL'MAN, Ya.I.; KLEVKE, B.A.; GAMBURG, D.Yu.

Production and utilization of liquid nitrogenous fertilizers.
Khim.prom. no.3:135-141 Ap-My '57. (MLRA 10:7)
(Ammonia) (Nitrogen)

GAMBURG, D.Yu., kandidat khimicheskikh nauk.

Chemistry and technical progress. Nauka i zhizn' 24 no.6:9-12
Je '57. (MLRA 10:7)
(Chemical industries)

GAMBURG, David Yudovich, kandidat khimicheskikh nauk; FAYNBOYM, I.B. redaktor; GUBIN, M.I., tekhnicheskiy redaktor.

[Chemistry and the progress of engineering] Khimiia i progress tekhniki. Moskva, Izd-vo "Znanie," 1957. 23 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.4, no.26) (MIRA 10:11)

(Chemistry)

SOV/137-58-9-19478

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 191 (USSR)

AUTHORS: Sarychev, B.L., Gamburg, D.Yu.

TITLE: Kinetics of the Oxidation of Iron With Water Vapor (Kinetika okisleniya zheleza vodyanym parom)

PERIODICAL: Tr. Gos. n.-i. proyektn. in-ta azotn. prom-sti, 1957, Nr 7, pp 121-154

ABSTRACT: Laboratory equipment was developed for the investigation of the kinetics of alternating reduction of oxides and oxidation of metals in a current of gas (H_2 and water vapor) in the 600-900° range. The main part of the installation are the electromagnetic scales which provide an automatic recording of the weight of the specimens. The test sample investigated, in the form of a powder with grain size of 3-5 mm, contained in a perforated quartz basket in the heated area of a cylindrical furnace, was suspended from a quartz thread connected to one of the plates of the analytical balance. Natural Fe ores, Fe catalyst for the NH_3 synthesis, and Armco Fe were taken. The weighed test samples of the powders were subjected to periodic reduction followed by oxidation under specified standard test

Card 1/2

SOV/137-58-9-19478

Kinetica of the Oxidation of Iron With Water Vapor

conditions with the purpose of studying the variations in the chemical activity of natural Fe ores in the course of a similar treatment, the establishment of a kinetic law of oxidation, and the relationship of the rate of oxidation to the temperature. The greatest chemical activity (capacity for decomposing water vapors) was exhibited by compounds of Fe with additions of Al_2O_3, K_2O, Na_2O, CaO, and MgO, in particular those of the Fe catalyst for the synthesis of NH_3. In the initial stages the oxidation of freshly reduced dispersed Fe compounds proceeded according to a linear law, in the following stage it followed a parabolic relationship to time, the exponent of the equation of the parabola being 1.56-2.50. It is established that for various specimens the exponents vary in relation to the initial composition of the ore and the temperature conditions according to the equation $1/n = 0.0_3$, $12T + 0.524$. The apparent value for the activation energy of oxidation, calculated by the usual method according to data of the temperature dependence of the rate of oxidation, constituted 17,200 and 34,800 cal for large lumps of Nizhne-Angarsk ore and Armco-Fe, respectively.

A.Sh.

1. Iron--Oxidation 2. Water vapor--Metallurgical effects 3. Laboratory equipment--Design 4. Oxidation-reduction reactions--Test results

Card 2/2

LEBEDEV, Vladimir Vasil'yevich,; GAMBURG, D.Yu., otv.red.; LEVI, T.G., red. izd-va,; MARKOVICH, S.G., tekhn. red.

[Hydrogen, its production and use] Vodorod, ego poluchenie i izpol'zovanie. Moskva, Izd-vo Akad. nauk SSSR, 1958. 68 p. (MIRA 11:11)

(Hydrogen)

GAMBURG, D. Yu.

AUTHOR: Gamburg, D.Yu., Candidate of Chemical Sciences 25-1-7/48

TITLE: Fuel Element (Toplivnyy element)

PERIODICAL: Nauka i Zhizn', 1958, # 1, pp 17-22 (USSR)

ABSTRACT: The American inventor, E. Gorin, suggested a basic scheme for the fuel element - the construction of a gas electrogenerator. The fuel galvanization element of this generator consists of two electrodes: a gas electrode, the carrier of which is a compound of iron oxide, iron fillings and fire clay; and an oxygen electrode, consisting of various ferric oxides combined with fire clay. A fire-resistant solid electrolyte made up of magnesium oxide saturated with alkali divides the two electrodes. The negative electrode is brought into contact with heated fuel gas, the positive electrode with oxygen (or air), also pre-heated by gases of the generator. The fuel gases and the oxygen interact in the zone of electromechanical reaction and thereby form water and carbon dioxide. The energy generated during this burning process is immediately converted into electric current.

Other fuel elements known at the present time, as suggested by the German scientisits K. Bischoff and E. Just; F.

Card 1/2

Fuel Element 25-1-7/48

Bacon (British Institute for Atomic Energy); the Soviet scientists O.K. Davtyan, P.M. Spiridonov and others, are based on different principles. There are good prospects for applying fuel elements in industry, especially in the field of transportation (engines, ships, etc). Moreover, fuel elements could be used in the form of small capacity aggregates for feeding communication facilties in non-electrified areas. The use of natural gases in fuel elements, as well as the production of water gases from the gasification of crude oil and crude oil residues for fuel elements is of great interest.

There are three sketches and five Russian references.

AVAILABLE: Library of Congress

Card 2/2

SOV/65-58-10-4/15

AUTHORS: Gamburg, D. Yu. and Sarychev, B. L.

TITLE: Investigations of the Oxidation Kinetics of Reduced Iron Contacts and Ores with Water Vapour During the Manufacture of Hydrogen (Issledovaniye kinetiki okisleniya vosstanovlennykh zheleznykh kontaktov i rud vodyanym parom v tselyakh polucheniya vodoroda)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 10, pp 16 - 24 (USSR)

ABSTRACT: Until recently, hydrogen was produced by gasification of solid and liquid fuels and by the conversion of gaseous hydrocarbons. The continuous manufacture of hydrogen according to the iron-vapour method was investigated in the USSR by IGI AN SSSR, VNII NP, and Institut nefti AN SSSR (the Institute of Petroleum AS USSR). The authors carried out experiments on the kinetics of the oxidation of reduced iron ore at high temperatures. Stages during the formation of hydrogen were observed in two plants (Ref.4); in the first, the rate of reduction and oxidation occurring in the solid phase, and in the second by analysing the reaction products of the gaseous phase. Hydrogen was used as reducing agent and water vapour as oxidising agent for the iron ores. The

Card 1/5

SOV/65-58-10-4/15

Investigations of the Oxidation Kinetics of Reduced Iron Contacts and Ores with Water Vapour During the Manufacture of Hydrogen

porous structure of the iron ores was defined by the methods described by N. M. Kamakin (Ref.13) and T. G. Plachenov (Ref.14), and photometric measurements were carried out on a Koch microphotometer. Samples of siderite, Magnetogorsk and Krivoy Rog reduced ores and hematite, magnetite etc. (synthesised iron samples) were tested. In all samples, when the order of porosity equalled 10 to 20%, the specific surface varied between 0.15 to 3.5 m^2. During long period reduction and oxidation the samples, after 20 to 30 cycles processing, gradually lose their activity which is obviously connected with the recrystallisation of the iron; the specific surface decreases approximately to one third. Most satisfactory results were obtained when the porosity of the ores varied between 20 to 40%, the size of the pores 0.1 to 0.2 cm^3/g and the specific surface 2 to 3 m^2/g. Synthesised samples of reduced iron, such as those used as high temperature catalysts during the synthesis of ammonia, possess a high degree of porosity and specific surface during reduction. These samples contain Al_2O_3 and K_2O additives which prevent sintering

Card 2/5

SOV/65-58-10-4/15

Investigations of the Oxidation Kinetics of Reduced Iron Contacts and Ores with Water Vapour During the Manufacture of Hydrogen

of the surface. The equilibrium of the system Fe - H - O was determined according to S. Emmet and I. Schulz (Ref.19): Table 1. Lowering of the temperature leads to decreased consumption of water vapour; the latter is smaller during the oxidation of metallic iron than during the oxidation of ferrous oxide. This discrepancy is reduced when increasing the temperature (Table 2). The degree of decomposition of water vapour can be increased by 1.5 to 2 times if oxidation is carried out in the presence of solid-phase FeO. Previous investigations of the oxidation kinetics of iron with water vapour are reviewed briefly (Refs.20 to 28). Experiments carried out on high porosity iron samples at 800°C showed that in the first stages of the oxidation the rate of growth of the oxide layer is directly proportional to the contact time of the iron with the vapour; this is a first order reaction. Kinetic curves showing the oxidation of iron are shown in Fig.1, and changes in the weight of the iron samples in Table 3. The influence of temperature on the rate of oxidation was investigated at temperatures between 600 and 900°C at 100 grade inter-

Card 3/5

SOV/65-58-10-4/15

Investigations of the Oxidation Kinetics of Reduced Iron Contacts and Ores with Water Vapour During the Manufacture of Hydrogen

vals (Fig.3), and temperature coefficients were calculated. The activation energies varied between 4,000 to 10,000 cal; for Armco iron the value wasconsiderably higher (35,000 cal). The yield of hydrogen (after 8 minute oxidation) rises with increasing volume rate (Fig.6). The following optimum process conditions are recommended: 900°C during the reduction of iron oxide, 750 to 800°C during the oxidation stage, volume velocity 3,000 to 4,500 litre vapour/air for 1 litre of iron ore. The contact time should not exceed 4 minutes, and the process should proceed until formation of the solid-phase magnetite (Fe_3O_4) can be observed. Fine-grained samples of iron ore should be used and an optimum granulation of 3 to 5 mm

Card 4/5

SOV/65-58-10-4/15

Investigations of the Oxidation Kinetics of Reduced Iron Contacts and Ores with Water Vapour During the Manufacture of Hydrogen

is recommended. There are 6 Figures, 3 Tables and 38 References: 26 Soviet, 8 English, 1 French and 3 German.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut azotnoy promyshlennosti (Research Institute for Nitrogenous Compounds)

Card 5/5

GAMBURG, D.Yu., kand.khim.nauk; RYABTSEV, I.I., kand.tekhn.nauk

Gasification of milled peat. Torf.prom. 35 no.2:3-9 '58.
(MIRA 11:5)

1. Gosudarstvennyy institut azotnoy promyshlennosti.
(Peat gasification)

BOGDANOV, N.N., kand.tekhn.nauk; VORONA, D.A., inzh.; GALYNKER, I.S., doktor tekhn.nauk; GAMBURG, D.Yu., kand.khim.nauk; GRIGOR'YEVA, Ye.A., inzh.; ZYKOVA, V.P., inzh.; RYABTSEV, I.I., kand.tekhn.nauk; SERGEYEV, B.F., kand.tekhn.nauk; STANKEVICH, P.I., kand.tekhn.nauk; LARIONOV, G.Ye., tekhn.red.

[Gasification of milled peat] Gazifikatsiia frezernogo torfa. Moskva, Gos.energ.izd-vo, 1959. 119 p. (MIRA 13:3)
(Peat gasification)

GAMBURG, D.Yu.; RYABTSEV, I.I.; KOTKOVSKIY, A.P.; SHCHEPAKOV, S.A.

Gasification of milled peat in a gas producer with a "fluidized" bed. Report No. 1: (Production of vapor-air gas). Trudy Inst. torfa AN BSSR 7:198-216 '59. (MIRA 14:1)
(Peat gasification)

GAMBURG, D.Yu.; RYABTSEV, I.I.; KOTKOVSKIY, A.P.; SHCHEPAKOV, S.A.

Gasification of milled peat in a gas producer with a "fluidized bed. Report No. 2: Production of semiwater gas. Trudy Inst. torfa AN BSSR 7:217-231 '59. (MIRA 14:1)
(Peat gasification) (Water gas)

GAMBURG, D.Yu.; RYABTSEV, I.I.; KOTKOVSKIY, A.P.; SHCHEPAKOV, S.A.

Gasification of milled peat in a gas producer with a "fluidized" bed. Report No. 3: Production of water gas. Trudy Inst. torfa AN BSSR 7;:232-239 '59. (MIRA 14:1)
(Peat gasification) (Water gas)

GAMBURG, D.Yu.

Utilization of heat from nuclear reactors for the production of synthesis gas and hydrogen. Gaz.prom. 4 no.10:17-20 O '59. (MIRA 13:2)

(Gases) (Nuclear reactors)

GAmburG, D. Yu.

PHASE I BOOK EXPLOITATION SOV/4358

Trud i tekhnika v semiletke (Labor and Engineering in the Seven-Year Plan) Moscow, Profizdat, 1960. 365 p. (Series: Massovaya biblioteka rabochego) 10,000 copies printed.

Compiler: S. O. Krylov; Ed.: A. V. Anisimov; Tech. Ed.: A. A. Golichenkova.

PURPOSE: This book is intended for the general reader.

COVERAGE: The book is a collection of 19 articles dealing with the achievements and progress of the Seven-Year Plan in branches of the Soviet economy and in science. Attention is given to power plant construction, machine building, cybernetics, electrification, transportation, prospecting, steel production, production of consumer goods, mechanization of agriculture, and chemistry. Suggestions for further progress are made. No personalities are mentioned. There are no references.

Prokopovich, A. Ye. [Deputy Director, Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankov (Experimental Scientific Research Institute of Metal-Cutting Machine Tools)] From Automatic Machine Tools to Automatic Production Lines, Shops, and Factories	59
Kobrinskiy, A. Ye. [Doctor of Technical Sciences] Program Control of Machine Tools	[illegible]
Solodovnikov, V. V. [Doctor of Technical Sciences, Professor] Cybernetics	119
Petrov, B. N. [Corresponding Member, Academy of Sciences USSR] Automation in the Near Future	127
Gamburg, D. Yu. [Candidate of Chemistry] Chemistry Today and Tomorrow	142
[illegible] A. S. [Candidate of Technical Sciences] Foundation of Industry	166
Steklov, V. Yu. [Deputy Director, Moscow Branch of the "Orgenergostroy" Institute] The Seven-Year Plan and the Electrification of the USSR	189
Chukhanov, Z. F. [Corresponding Member, Academy of Sciences USSR] On Comprehensive Utilization of Fuel	207
Borisov, M. I. [Chairman, Central Committee, Trade Union of Workers in the Building-Materials Industry]. The Conveyor in a Large Construction Project.	223
Chekanov, A. A. [Candidate of Technical Sciences] Welding Belongs to the Future	252
Shcherbakov, D. I. [Member, Academy of Sciences USSR] What Is New in Prospecting for Mineral Resources	267
Petrov, N. A. [Candidate of Technical Sciences, Deputy Chairman, State Scientific and Technical Committee, Council of Ministers of the USSR] New Engineering for the Creators of Plenty	290
Shvyrev, S. S. [Instructor at the Automation Laboratory, Tsentral'nyy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti (Central Scientific Research Institute of the Cotton Industry)] For the Welfare of the People	308
Breyev, B. D. [Director, Tsentral'nyy nauchno-issledovatel'skiy institut kozhevennoy i obuvnoy promyshlennosti (Central Scientific Research Institute of the Leather and Footwear Industry)] Half a Billion Pairs of Shoes	320
Karpenko, A. N., Member, All-Union Academy of Agricultural Sciences imeni V. I. Lenin. Large-Scale Mechanization of Agriculture	325
Zvonkov, V. V. [Corresponding Member, Academy of Sciences USSR, Honored Scientist and Technologist] A Big Leap	341
Explanation of Foreign Terms and Difficult Words Occurring in the Book	363

AVAILABLE: Library of Congress

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Card 5/5

GAMBURG, D.Yu.

Seminar on the the methods of utilization of solid fuel in power engineering. Khim.i tekh.topl.i masel 5 no.5:72 My '60. (MIRA 13:7)
(Fuel) (Power engineering)

GAMBURG, D. Yu., kand.khim.nauk

Collapse of energism. Nauka i zhizn' 27 no.6:50-55 Je '60.
(MIRA 13:7)

(Religion) (Idealism)

GAMBURG, D.Yu.

Gasification of powderlike fuel in a pulsating flow. Gaz. prom. 5 no.5:12-16 My '60. (MIRA 14:11)
(Coal gasification) (Gas producers)

GAMBURG, D.Yu.; BELUGINA, L.N.

Changes in the porous structure of coke during its gazification with carbon dioxide. Inzh.-fiz. zhur. no.12:86-90 D '60. (MIRA 14:3)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza, g. Moskva.

(Coke)

S/025/61/000/001/001/003
A166/A026

AUTHOR: Gamburg, D.Yu., Candidate of Chemical Sciences

TITLE: A Word About Soot

PERIODICAL: Nauka i zhizn', 1961, No. 1, pp. 17 - 23

TEXT: The article deals with the properties, uses and production technology of soots and active carbons. The Konstruktorskoye byuro "Elektroapparat" ("Elektroapparat" Designing Bureau) of the Stavropol Sovnarkhoz is working on installations for the granulation of soot. The design for such an installation has been worked out which will give a yearly saving of 500,000 rubles on transport costs alone. Professor P.A. Tesner has developed a new theory of the mechanism of soot formation. According to this theory, soot foci form during the initial stages of the break-down of hydrocarbons, whereupon further soot is deposited upon these foci. The technological process could therefore be controlled to give few initial foci (leading to coarse soot) or numerous such foci (giving a fine end-product). The author then describes the acetylene method of producing soot. This gives high-grade soot, but is expensive and not suitable for large-scale production. Research is therefore being carried out into other methods, with an eye to combining soot production with technology of other chemical products, especially acetylene, hydro-

Card 1/2

A Word About Soot

S/025/61/000/001/001/003
A166/A026

gen and carbon monoxide. At present research is being conducted into a new method of producing soot from liquid hydrocarbons. If pure air and a certain amount of air enriched with oxygen and mixed with water vapor is fed into the apparatus where the hydrocarbon raw material is being burnt, soot is obtained together with a synthesis gas consisting mainly of carbon monoxide, hydrogen and a small amount of carbon dioxide and nitrogen. This could then be used for the synthesis of ammonia. If pure oxygen and water vapor are introduced into the combustion chamber, the resulting gas would be suitable for spirit production and various other chemical syntheses. The synthesis gas might be used as the main product and the soot regarded as a bi-product, so that the soot plant would become part of a chemical complex producing nitrogenous fertilizers, synthetic organic substances and soot. A further prospect is that, in the electric cracking of natural gas for acetylene production, bi-products would be hydrogen and large amounts of soot. In the USSR a test installation is at present in operation to study the physical and chemical properties of soot formed during the electric cracking of methane into acetylene. The results indicate that soot of the requisite quality could be obtained by this method. There is 1 figure.

Card 2/2

GAMBURG, D.Yu.

Gasification of fuel dust under pressure. Gaz.prom. 6 no.2:13-19 '61. (MIRA 14:4)

(Coal gasification)

GAMBURG, D.Yu., kand.khim.nauk

Word about carbon black. Nauka i zhizn' 28 no.1:17-23 Ja '61.
(MIRA 14:1)

(Carbon black)

GAMBURG, D.Yu., kand.khimicheskikh nauk

Fertilizers obtained from smoke. Nauka i zhizn' 28 no.3:49 Mr '61. (MIRA 14:3)

(Fertilizers and manuer) (Waste products)

S/138/62/000/012/007/010
A051/A126

AUTHORS: Gamburg, D. Yu., Kazakov, A. V., Lelyakina, T. M., Belugina, L. N., Veselovskiy, K. B.

TITLE: Investigation of carbon black produced by electro-cracking of natural gas to acetylene

PERIODICAL: Kauchuk i rezina, no. 12, 1962, 22 - 24

TEXT: Samples of acetylene carbon blacks, obtained from dry collection and produced in one of the electro-cracking plants, were studied in 1959 - 1960 by the ГИАП (GIAP - State Institute of Scientific Research and Design of the Nitrogen Industry and Products of Organic Synthesis), in cooperation with НИИРП (NIIRP - Scientific Research Institute of the Rubber Industry). Investigations were conducted to determine the possible use of these samples as fillers in rubber mixes. The major disadvantages of the investigated carbon blacks were found to be: the high volumetric numbers, elevated ash content and a low density which in some cases not exceeded 40 - 50 g/l. Work has been carried out to increase the density by 3 to 4 times and reduce the volumetric number from 34 to 5.9 cm^3/g. The ash content could also be reduced by regulating the production process through gas annealing with vapour condensate. Finally, the elevated content of volatile substances could also be reduced with an increase in annealing temperature. The advantages of the methane electro-cracking carbon black are: the high tensile strength, hardness according to TM-2 (TM-2), increased tear resistance exceeding the standard acetylene carbon black in this respect. It was experimentally established that with the properly adjusted carbon-black production process from gases of methane electro-cracking, carbon black compression, and its granulation, a stable product is formed which is not inferior to standard acetylene carbon black [П-1250 (P-1250)], and carbon black from methane electro-cracking produced at present in the GFR. The investigated carbon black gives the same properties to the rubber mixes as the latter two. There are 2 tables.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza i Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (State Institute of Scientific Research and Design of the Nitrogen Industry and Products of Organic Synthesis and Scientific Research Institute of the Rubber Industry)

Card 2/2

GAMBURG, D.Yu., kand. khim. nauk; LEYAKINA, T.M., inzh.; BELUGINA, L.N., inzh.

Reacting surface of solid fuels and surface of coal ashes. Teploenergetika 10 no.8:38-40 Ag '63. (MIRA 16:8)

1. Gosudarstvennyy proyektnyy i nauchno-issledovatel'skiy institut azotnoy promyshlennosti.

(Coal gasification)

GAMBURG, [illegible]

Vapor-oxygen gasification of mazut. Gaz. prom. 9 no.1:
14-20 '64. (MIRA 17:12)

GAMBURG, D.Yu.; BELUGINA, L.N.; LELYAKINA, T.M.

Coke surface changes dependent on the nature of the gasifying agent. Khim. i tekh. topl. i masel 9 no.1:38-41 Ja '64. (MIRA 17:3)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.

L 54552-65 EWT(m)/EPF(c)/EWP(j)/EWP(t)/EWP(b) Pc-4/Pr-4 IJP(c) JD/RM

ACCESSION NR: AP5016718 UR/0286/65/000/010/0019/0019

AUTHORS: Baybayev, A. I.; Gamburg, D. Yu.; Reshetov, V. P.; Shaglyan, Sh. K.

TITLE: A method for improving the properties of carbon black. Class 12, No. 170923

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 19

TOPIC TAGS: carbon black, methane, cracking inert gas

ABSTRACT: This Author Certificate presents a method for improving the properties of carbon black by roasting it in a stream of an inert gas. The carbon black (separated from the gases produced in electrocracking of methane by chilling them with a vapor condensate at a temperature not lower than 250C) is roasted at a temperature of 900-1100C.

ASSOCIATION: none

SUBMITTED: 30May62 ENCL: 00 SUB CODE: GC, MT

NO REF SOV: 000 OTHER: 000

Card 1/1

GAMBURG, D.Yu.; LELYAKINA, T.M.; TURKINA, T.I.

Conditions for the thermal conversion of solid fuel and the specific surface of coke residue. Khim.i tekh.topl. i masel 10 no.1:34-35 Ja '65. (MIRA 18:4)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.

GAMBURG, G.L.

Drying of raw cotton by means of infrared rays. Sbor.nauch.-issl.
rab.TTI no.12:25-28 '61. (MIRA 15:11)
(Cotton--Drying) (Infrared drying apparatus)

GAMBURG, K.Yu., kandidat khimicheskikh nauk.

Chemistry's contribution to agriculture. Nauka i zhizn' 22 no.4: 33-36 Ap '55. (MLRA 8:6)
(Agricultural chemistry)

POLEVOY, V.V.; GAMBURG, K.Z.

Effect of auxin on certain aspects of matabolism in sections of corn coleoptiles. Izv.Sib.otd.AN SSSR no.11:95-98 '59.
(MIRA 13:4)

1. Vostochno-Sibirskiy filial Sibirskogo otdeleniya AN SSSR i Leningradskiy gosudarstvennyy universitet.
(Corn (Maize)) (Auxin)

GAMBURG, K.Z.

Effect of auxin and the osmotic concentration of the medium on the growth of the fragments of corn coleoptiles. Trudy Vost.-Sib. fil. AN SSSR. no.35:12-20 '62. (MIRA 17:6)

GAMBURG, K.Z.; MAL'TSEVA, V.N.

Effect of gibberellin on the growth of internodes in chick-pea.
Dokl. AN SSSR 154 no.5:1214-1215 F'64. (MIRA 17:2)

1. Vostochno-Sibirskiy biologicheskiy institut Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom A.L. Kursanovym.

GAMBURG, K.Z.; MAL'TSEVA, V.N.; KOBYL'SKIY, G.I.

Effect of gibberellin on the amount of nucleic acids in the internodes of pea sprouts. Fiziol.rast. 12 no.1:146-151 Ja-F '65. (MIRA 18:3)

1. Vostochno-Sibirski biologicheskiy institut Sibirskogo otdeleniya AN SSSR, Irkutsk.

GAMBURG, K.Z.

Separation of indoleacetic oxidase from an indoleacetic oxidase inhibitor by gel filtration on sephadex G-25. Fiziol. rast. 12 no.2:361-363 Mr-Ap '65. (MIRA 18:6)

1. Vostochno-Sibirskiy biologicheskiy institut Sibirskogo otdeleniya AN SSSR, Irkutsk.

[illegible]

1. GERASIMOV, Ya. I.; [illegible], [illegible]; [illegible], I. V.

2. USSR (600)

"The Thermic Dissolution of Sulfides of Vanadium," Zhur. Fiz. Khim, 13, No. 10, 1939. MGU, NIIKh, Laboratory of Chemical Thermodynamics, received 11 January 1939.

9. [redacted] Report U-1615, 3 Jan 1952

GAMBURG, K.Z.

Effect of gibberellin and auxin on the growth of the first leaf and root formation in segments of corn plants. Dokl.AN SSSR 145 no.4:941-944 Ag '62. (MIRA 15:7)

1. Vostochno-Sibirskiy biologicheskiy institut Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom A.L.Kursanovym.
(GROWTH PROMOTING SUBSTANCES) (CORN (MAIZE))

KAMENEV, P.N., doktor tekhnicheskikh nauk, professor; GAMBURG, P.Yu., kandidat tekhnicheskikh nauk, dotsent; KISSIN, M.I., kandidat tekhnicheskikh nauk, dotsent [deceased]; SHCHEGLOV, V.P., kandidat tekhnicheskikh nauk, dotsent; STAROVEROV, I.G., inzhener, retsenzent; NINEMYAGI, D.K., redaktor izdatel'stva; PERSON, M.N., tekhnicheskiy redaktor

[Heating and ventilation] Otoplenie i ventiliatsiia. Moskva, Gos. izd-vo lit-ry po stroit. i arkhit. Pt.1. [Heating] Otoplenie. 1956. 343 p. (MLRA 10:2)
(Heat engineering)

GAMBURG, P.Yu., kand. tekhn. nauk, nauchnyy red.; GOLUBENKOVA, L.A., red. izd-va,; BOROVNEV, N.K., tekhn. red.

[Panel heating of buildings] Panel'noe otoplenie zdanii. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958. 100 p. (MIRA 11:11)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy promyshlennosti SSSR.

(Radiant heating)

GAMBURG, P.Yu., dotsent, kand.tekhn.nauk, red.; VINOGRADOVA, G.M.,
red.izd-va; STEPANOVA, E.S., tekhn.red.; SHERSTNEVA, N.V.,
tekhn.red.

[Designing heating, ventilation, and air conditioning systems for residential and public buildings. Section of heat supply, heating, and ventilation] Proektirovanie otopleniia, ventiliatsii i konditsionirovaniia vozdukha zhilykh o obshchestvennykh zdanii. Sektsiia teplosnabzheniia, otopleniia i ventiliatsii. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 142 p. (MIRA 13:3)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy industrii.
(Heating) (Ventilation) (Air conditioning)

GAMBURG, P.Yu.

Conference on the improvement of ventilation, heating, and
heat supply of industrial buildings. Vod.i san.tekh. no.8:
40-41 Ag '59. (MIRA 12:11)
(Factories--Heating and ventilation)

GAMBURG, P.Yu., red.; GINTSBURG, V.B., red.; VINOGRADOVA, G.M., red. izd-va; OSENKO, L.M., tekhn. red.

[Improving the design and planning of ventilation, heating and heat supply of industrial buildings] Uluchshenie proektirovaniia ventiliatsii, otopleniia i teplosnabzheniia promyshlennykh zdanii. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1960. 94 p. (MIRA 14:10)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy industrii SSSR. (Industrial buildings--Heating and ventilation)

ADAMOVICH, P.V.; BATURIN, V.V.; VAKHVAKHOV, G.G.; VAYNGAUZ, L.G.; VILENSKIY, Ye.Ya.; GAMBURG, P.Yu.; DAVYDOV, Yu.S.; KARPIS, Ye.Ye.; KUZNETSOVA, Z.I.; KOP'YEV, S.F.; LIVCHAK, I.F.; LOBACHEV, P.V.; LEV, G.M.; NOTKIN, Ye.M.; PIRUMOV, A.I.; POLIKARPOV, V.F.; PROTOPOPOV, A.P.; REPIN, N.N.; SLADKOV, S.P.; TALIYEV, V.N.; TROITSKAYA, F.B.; FEDOROV, M.N.; SHEVELEV, F.A.; SHKABEL'NIKOVA, L.P.; SHCHUTSKIY, A.I.; SMIRNOV, L.I., inzh., nauchnyy red.; SMIRNOVA, A.P., red. izd-va; MOCHALINA, Z.S., tekhn. red.; RODINOVA, V.R., tekhn. red.

[Present level and prospects for the development of sanitary engineering and the production of sanitary engineering equipment] Sovremennyi uroven' i perspektivy razvitiia sanitarnoi tekhniki i proizvodstva sanitarno-tekhnicheskogo oborudovaniia. Moskva, Gosstroiizdat, 1962. 283 p. (MIRA 15:8)

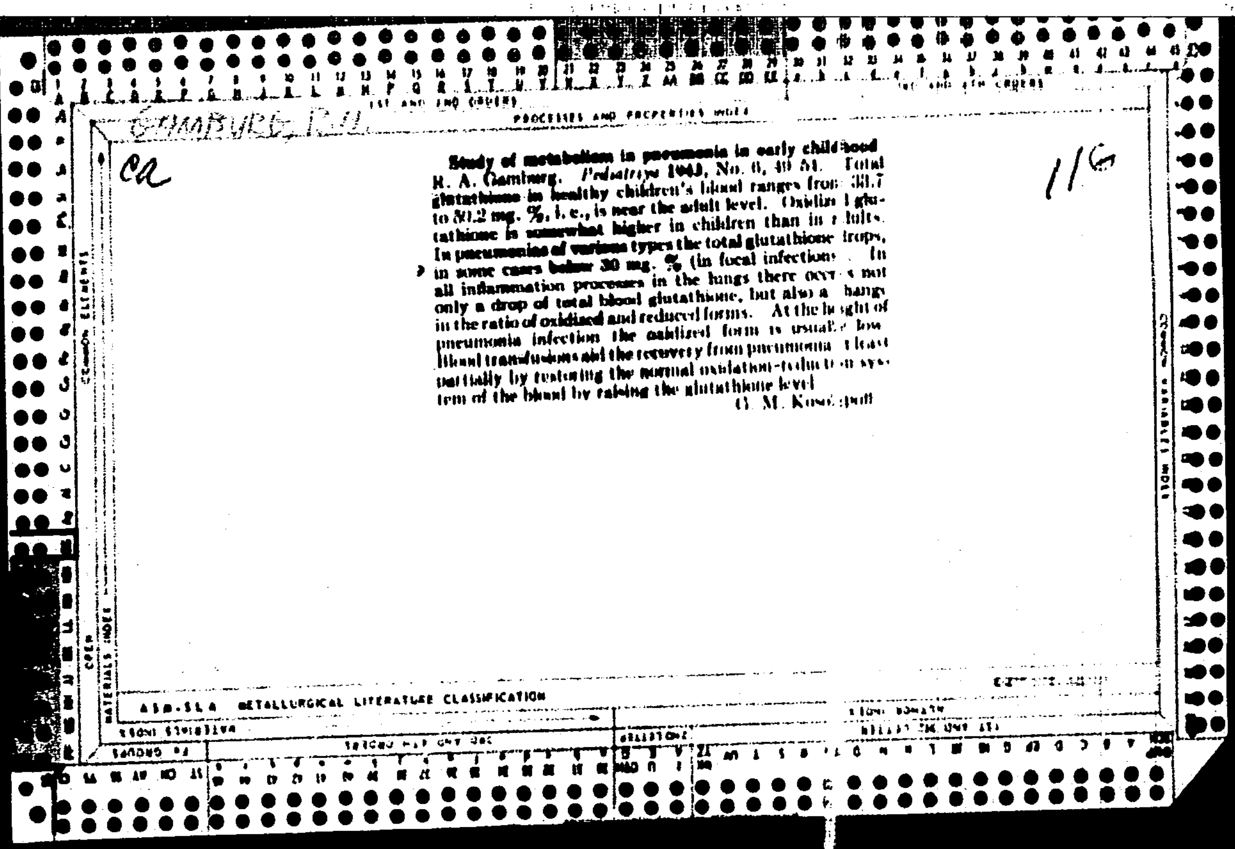
1. Akademiya stroitel'stva i arkhitektury SSSR. Institut sanitarnoy tekhniki.

(SANITARY ENGINEERING)

BUDOVICH, B.; GAMBURG, R.; ZAKHARENKO, A.; NADEZHDINA, K., obshchestvennitsa-pensionerka; NOVIK, L.; PIGUZOVA, N.; SMIRNOVA, I.; FOMITSKAYA, L., deputat Minskogo gorodskogo Soveta; BURMISTOVA, L.

Place nurseries and kindergartens under the control of women. Rabotnitsa 40 no.7:18-19 Jl '62. (MIRA 16:2)

1. Predsedatel' zhenskogo soveta stankostroitel'nogo zavoda imeni Oktyabr'skoy revolyutsii (for Budovich). 2. Predsedatel' zhenskogo soveta gomesl'skoy fabriki "Komintern" (for Gamburg). 3. Korrespondent gazety "Gomel'skaya pravda" (for Zahkarenko). 4. Korrespondenty zhurnala "Rabotnitsa i syalyanka" (for Piguzova, Smirnova). 5. Korrespondent zhurnala "Rabotnitsa" (for Burmistrova).
(White Russia—Nursery schools) (White Russia—Kindergartens)


1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GAMBURG, R.A.

Ca

11G

Study of metabolism in pneumonia in early childhood. R. A. Gamburg. *Pediatriya* 1943, No. 6, 40-51. Total glutathione in healthy children's blood ranges from 30.7 to 80.2 mg. %, i. e., is near the adult level. Oxidized glutathione is somewhat higher in children than in adults. In pneumonias of various types the total glutathione drops, in some cases below 30 mg. % (in focal infections). In all inflammation processes in the lungs there occurs not only a drop of total blood glutathione, but also a change in the ratio of oxidized and reduced forms. At the height of pneumonia infection the oxidized form is usually low. Blood transfusions aid the recovery from pneumonia at least partially by restoring the normal oxidation-reduction system of the blood by raising the glutathione level.

G. M. Kosolapoff

GUREVICH, Simon Borisovich; KONDRAT'YEV, A.G., kand. tekhn.nauk, retsenzent; GAMBURG, R.A., red.; ORLOVA, L.I., red.; POL'SKAYA, R.G., tekhn.red.

[Physical processes in television pickup tubes] Fizicheskie protsessy v peredaiushchikh televizionnykh trubkakh. Moskva, Gos. izd-vo fiziko-matem.lit-ry, 1958. 399 p. (MIRA 12:3)

(Television cameras)

SOV/106-59-1-6/12

AUTHOR: Gamburg, R.A.

TITLE: Television Transmitting Cameras (Peredayushchiye televizionnyye kamery)

PERIODICAL: Elektrosvyaz', 1959, Nr 1, pp 44-52 (USSR)

ABSTRACT: The overall performance of a television system is limited by the camera. Defects in this instrument are of two kinds: either the signal carrying the picture information lacks some quality due to shortcomings in the pick-up system, or the signal is overlaid by false, interfering signals. The present article considers only black and white tubes. At the present time no one type of tube enjoys unquestioned superiority over all the others. The first type of tube historically was the iconoscope in which a photo-sensitive surface was explored by a beam of fast electrons. In the orthicon tube the scanning process was carried out with slow electrons. The image iconoscope used the principle of transferred image using secondary emission while the image orthicon was a similar analogous improvement. These four tube types used photo-emissive surfaces. Recently a fifth type, the vidicon, has become available; it uses a photo-conductive surface. The relative performances of

Card 1/6

Television Transmitting Cameras SOV/106-59-1-6/12

the tube types mentioned in the order above are given in Table 1; the properties listed are: resolving power, signal-to-noise ratio at the output of the video amplifier, illumination sensitivity, maximum excursion of the video signal, the transmission tonal gradations, information about black level, parasitic signal, inertia. The use of the standard test chart type 0249 may give misleading results when determining legibility and tonal gradations; these estimates are too subjective. The entries in Table 1 are also of a qualitative nature, for example the resolving power is considered satisfactory, if the legibility in the centre of the image is at least 600. A most objective estimate of resolving power is made by comparing the output signal as it varies with the width of a black and white bar projected onto the sensitive surface of the transmitting tube. Simple statements of signal-to-noise ratio are liable to be misleading unless the distribution of noise with frequency is also known. The television tubes fall off in performance as the level of illumination is reduced. The values quoted in Table 1 are those for

Card 2/6

which the other parameters may be guaranteed. Information about black level is necessary to preserve from time to time the correct average illumination of the scene. The data given in Table 1 enables us to determine the important fields of application for each type of tube. For example the vidicon is well adapted to film transmission from which the light level may be kept conveniently high and where the absence of spurious signals is a distinct advantage. For outside broadcasts, where the use of long-focus lenses implies a low image brightness, the image orthicon is preferred in spite of its other disadvantages. The image iconoscope is preferred for studio work, since with the comparatively low light levels obtaining there, the image quality obtained is better than that with either the image orthicon or vidicon cameras. It is stated that the iconoscope and orthicon now find less application and even the most advanced form of orthicon, the C.P.S. - Emitron, cannot be used as widely as occasions demand. Fig 1 shows the general features of a television camera in a block diagram: 1) the optical system;

2) transmitting tube; 3) deflection system; 4) focusing system; 5) head amplifier; 6) electronic view finder; 7) current stabiliser for focusing systems; 8) protection circuits for the tube; 9) high-voltage source; 10) line-scan generator; 11) frame-scan generator; 12) circuit for blanking pulses; 13) control and monitoring circuits. The angle of view of the camera in the horizontal plane is 2 β where tan β = b/2f; b is the width of the image on the sensitive surface and f is the focal length of the objective. It follows therefore that the use of different tubes in cameras necessitates different lenses. Table 2 is drawn up for the same five types of tubes and the properties listed are: the dimensions of the working part of the light sensitive surface, optimum relative aperture, illumination on the object. The same depth of focus is assumed in each case and the reflection coefficient of the object is supposed 0.6. The studio cameras usually have focal lengths between 35 and 200 mm while outside broadcast cameras usually have a focal length up to 1000 mm. It is common to fit a revolving turret head to a camera

SOV/106-59-1-6/12

Television Transmitting Cameras

carrying, say, four separate lenses; the varying light levels encountered in the practice may not always be countered by using variable apertures, since the depth of focus then varies and the proper solution is to use neutral filters. The first contribution to the design of camera head amplifiers came from G.V. Braude in 1933. In order to get the highest possible signal-to-noise ratio the first valve was operated so as to provide a high input resistance. Unfortunately parasitic capacitances provided a fall in frequency characteristics and methods were devised for correcting this in other circuits. Two forms of correction are shown in Fig 2; version (a) is about twice as effective as (b) but requires quite high supply voltages. In recent years the cascode circuit has been preferred but with many modern tubes the noise output from the tube itself exceeds many times the contribution of the amplifier. The bandwidth of the pre-amplifier should be at least 7.3 Mc/s so as not to restrict the performance of the overall system. The author extends his gratitude to

Card 5/6

Television Transmitting Cameras SOV/106-59-1-6/12

Candidate in Mathematical Physics S.B. Gurevich and to T.Ya. Kharitonova.
There are 2 figures, 2 tables and 10 references, 8 of which are Soviet and 2 English.

SUBMITTED: March 17, 1958

Card 6/6

LUR'YE, O.B. Prinimali uchastiye: SHEROV-IGANT'YEV, G.P.; GAMBURG, R.A.; ENTINA, Ye.I.; YANKEL'SON, I.S., red.; ZABOLOTSKIY, N.G., red.; SVESHNIKOV, A.A., tekhn. red.

[Video frequency amplifiers] Usiliteli videochastoty. Izd.2., perer. i dop. Moskva, Izd-vo "Sovetskoe radio," 1961. 675 p. (MIRA 15:2)

(Amplifiers (Electronics))

GAMBURG, R. L.

PA 13/49T70

USSR/Medicine - Pneumonia, Therapy Jul/Aug 48
Medicine - Sulfanilamide, and
Sulfanilamide Derivatives

"Utilization of Sulfamide-100 for Treating Pneumonia in Children and a Comparative Analysis of Its Action," R. L. Gamburg, E. M. Kravets, L. B. Balayan, and R. L. Freyd, Inst of Pediatrics, Acad Med Sci USSR, 3 pp

"Pediatriya" No 4

Describes treatment of 80 children with sulfamide-100. Discusses its effectiveness.

13/49T70

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USSR/Medicine - Penicillin Therapy **Sep 49**
Antibiotics

"Standard Use of Penicillin in the Treatment of Children," P. L. Gamburg, T. N. Bol'shakova, Therapeutics Clinic imeni Speranskiy, Ord of Red Banner of Labor Inst of Pediatrics, 1 3/4 pp

"Sov Med" No 9

Discusses data collected at authors' clinic during 1946-47 on best method of using penicillin in children, penicillin content in patients' blood after each injection, and relative values of Soviet and US penicillin. Intramuscular

FDD 151T60

USSR/Medicine - Penicillin Therapy Sep 49
(Contd)

injection of 5,000-10,000 international units administered six times per day proved best method. This method maintained content in the blood at high level of 0.1-0.2 unit. Claims that Soviet penicillin powder, made at Plant imeni Karpov, is not inferior to US penicillin.

151T60

GAMBURG, R.L.

GAMBURG, R. L., EIDEL'SHTEIN, S. I., GEL'FER, R. A., RUBTSOVA, L. K.

Penicillin inhalation therapy. Pediatriia, Moskva No. 6, Nov.-Dec. 50. p. 44-51

1. Of the Department of Pediatrics, Central Institute for the Advanced Training of Physicians (Head of Department--Prof. G. N. Speranskiy, Active Member of the Academy of Medical Sciences) attached to the Hospital imeni Dzerzhinskiy (Head Physician--Ye. L. Guterman) and of the Department of Experimental Therapy VNIP (Head of Department--Prof. Z. V. Yermol'yeva, Corresponding Member of the Academy of Medical Sciences).

CLML 20, 3, March 1951

GAMBURG, R.L.; SKVORTSOVA, T.A.

Method of administration of penicillin in children. Pediatriia, Moskva No.1:49-50 Jan-Feb 51. (CLML 20:6)

1. Of the Department of Pediatrics of the Central Institute for the Advanced Training of Physicians.

USSR/Medicine - Antibiotics Sep/Oct 51

"Application of Albomycin in the Treatment of Pneumonia of Young Children," Docent R. L. Gamburg, Chair of Pediatrics, Cen Inst for Advanced Tng of Physicians Based at Children's Hosp imeni Dzerzhinskiy

"Pediatriya" No 5, pp 37-44

Albomycin was discovered at the Lab of Antibiotics, Acad Med Sci USSR, by G. F. Gauze et al. It is effective against both gram-pos and gram-neg microorganisms and has wider scope of action than

192T80

USSR/Medicine - Antibiotics (Contd) Sep/Oct 51

penicillin. Clinical results demonstrated that albomycin has pronounced therapeutic effect in treatment of acute focal pneumonia of babies.

192T80

GAMBURG, R. L., DOCENT

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Pneumonia

Use of albomycin in pneumonia in young children. Novosti med. no. 23, 1951.

9. **Monthly List of Russian Accessions**, Library of Congress, DECEMBER 1952, Unclassified.

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(Raisa L'vovna)

"Aspects of the Course of Pneumonia in Children and its Treatment," (Dissertation), Academic degress of Doctor in Medical Sciences, based on her defense, 9 March 1954, in the council of the Central Inst. for the Advanced Training of Physicians.

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"Combined chemotherapy using biomycin for pneumonia in infants," appears in TABCON of "Biomycin (Experimental Study and Clinical use of Biomycin)", edited by A. F. Bilibin, Moscow 1954.

SO: Translation-417, 21 Jun 1955.

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Combined chemotherapy of pneumonia in infants with a new Russian antibiotic biomycin. Pediatriia no.2:11-17 Mr-Ap '54. (MLRA 7:6)

L. Iz kafedry pediatrii (zav. deystvitel'nyy chlen AMN SSSR prof. G.N.Speranskiy) TSentral'nogo instituta usovershenstvovaniya vrachey (dir.V.P.Lebedeva) na baze detskoy bol'nitsy im.F.E. Dzerzhinskogo.

(ANTIBIOTICS, therapeutic use,
*biomycin in pneumonia in inf.)
(PNEUMONIA, in infant and child,
*ther., biomycin)

GAMBURG, R.L.

MATVEYEV, M.P.; GAMBURG, R.L.; SOLOMATINA, O.G.

"Rheumatism in children." A.B.Volovik. Reviewed by M.P.Matveev, R.L.Gamburg, O.G.Solomatina. Pediatriia 39 no.2:87-89 Mr-Ap '56. (MIRA 9:8)

(VOLOVIK, A.B.)
(RHEUMATIC FEVER)